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## Interface Testing

[Test Main](#)[Test Phases Main](#)

### Purpose:

The purpose of interface testing is to test the interfaces, particularly the external interfaces with the system. The emphasis is on verifying exchange of data, transmission and control, and processing times. External interface testing usually occurs as part of System Test.

Not all organizations have a separate test environment for their systems, thus complicating external interface testing. Be sure to coordinate early with the appropriate organizations and establish how the interfaces will be tested. In some case, the external organizations manually review data but do not actually run it through their system. This adds additional risk to the actual implementation, but sometimes cannot be avoided.

### Assumptions/Pre-Conditions:

The contractor/developer should have completed unit, functional, and integration testing successfully and all critical errors should have been addressed. An updated version of the code should have been delivered to the Configuration Manager.

### Expectations:

- The primary emphasis is testing the interfaces with external systems. Depending on the number of external interfaces, this may be very complicated.
- The project should conduct a series of planning and coordination meetings with the external organizations in preparation for testing. Topics include:
  - Who will be the primary contacts?
  - When is testing scheduled?
    - If there is no test environment available, testing may have to occur on weekends or during non-production hours.
  - What types of test cases will be run, how many, and what are they testing?
    - Provide copies of test cases and procedures to the participants.
    - If the external organization has specific cases they would like to test, have them provide copies.
  - Who will supply the data and what will it contain? What format will it be in (paper, electronic, just notes for someone else to construct the data, etc.)?
  - Who is responsible for reviewing the results and verifying they are as expected?
  - How often will the group meet to discuss problems and testing status?
- Both normal cases and exceptions should be tested, on both sides of the interface (if both sides exchange data). The interface should be tested for handling the normal amount and flow of data as well as peak processing volumes and traffic.
- If appropriate, the batch processing or file transmission "window" should be tested to ensure that both systems complete their processing within the allocated amount of time.
- If fixes or changes need to be made to either side of the interface, the decisions, deadlines and re-test procedures should be documented and distributed to all the appropriate organizations.

### Responsibilities:

- Creation of Tests - Developer, Database and/or System Administrator, or Tester
- Execution of Tests - Tester

- Approval of Test Results/Exit Decision - Development Manager, Test Manager, QA Manager, Configuration Manager, State Project Manager, External Organization Managers (as appropriate)
- For a complete list of roles and responsibilities, refer to the [Responsibility Assignment Matrix \(RAM\)](#) (MS Word)

**Environment:**

System Test Environment and External Organizations' Test Environment(s)

**Type of Data:**

Real data - data which was processed on the legacy system and is now being re-used for testing

**Exit Decisions:**

- Refer to the [general test exit/acceptance criteria](#).

**References:**

- IEEE Standard [829-1998](#), Standard for Software Test Documentation (link to pdf)
- IEEE Standard [1012-1998](#), Standard for Software Verification and Validation, Table 1, Section 5.4.5 within table (the tables appear prior to the annex) (link to pdf)
- Archived IEEE Standard [1059-1993](#), Guide for Software Verification and Validation Plans, Sections 4.2.4 and 5.5.6 (link to pdf)

**Samples:**

- None